

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1-27. (Canceled)

28. (Currently Amended) An endpoint device for responding to an interrogator after receiving an interrogating signal containing a main carrier by transmitting a reflected signal generated by modulating the main carrier with appropriate information, ~~said-the~~ endpoint device comprising:

a ~~an individual-frequency-utilization-ratio frequency utilization ratio~~-setting portion operable to set a distribution of ~~a-an individual~~ frequency utilization ratio which is a ratio of time period during which each frequency channel is used as a hopping frequency of a subcarrier signal in which a frequency hopping is implemented and which is used to modulate ~~said-the~~ main carrier, over a predetermined range of frequency of the subcarrier signal that consists of a plurality of mutually adjacent frequency channels;

a frequency determining portion operable on the basis of the distribution of the ~~individual~~ frequency utilization ratio set by ~~said-the individual-frequency-utilization-ratio frequency utilization ratio~~-setting portion to determine a frequency of ~~said-the~~ subcarrier signal by random selection within ~~said-the~~ predetermined range of frequency;

a battery cell; and

a power-source-information detecting portion operable to detect at least two discrete operating states of ~~said-the~~ battery cell, the at least two discrete operating states of the battery cell being at least able to power the endpoint device;

wherein ~~in response to a supply voltage of the battery cell being lower than a predetermined threshold value, saidthe individual-frequency-utilization-ratio frequency-utilization ratio-setting portion is configured to shift a statistical center frequency of the~~

distribution of the individual frequency utilization ratio to a lower frequency by selecting a first individual-frequency-utilization-ratio distribution pattern from a plurality of individual-frequency-utilization-ratio distribution patterns that includes at least the first individual-frequency-utilization-ratio distribution pattern and a second individual-frequency-utilization ratio-distribution pattern.

wherein is operable on the basis of one of the at least two discrete operating states of said battery cell detected by said power source information detecting portion to set, of a first distribution pattern in which the individual frequency utilization ratio the first individual-frequency-utilization-ratio distribution pattern is relatively high in the relatively low frequency channels and a second distribution pattern in which the individual frequency utilization ratio the second individual-frequency-utilization-ratio distribution pattern is relatively high in the relatively high frequency channels, the first distribution pattern so that a center frequency of the distribution of the frequency utilization ratio of the subcarrier signal is lowered, when a supply voltage of said battery cell detected by the power source information detecting portion is lower than a predetermined threshold value.channels.

29-30. (Canceled)

31. (Currently Amended) The endpoint device according to claim 28, wherein said frequency utilization ratio the individual-frequency-utilization-ratio setting portion is operable to raise a center frequency of the distribution of the individual frequency utilization ratio of the subcarrier signal, when a supply voltage of said the battery cell detected by the power-source-information detecting portion is higher than a predetermined threshold value.

32. (Currently Amended) The endpoint device according to claim 28, wherein said frequency utilization ratio the individual-frequency-utilization-ratio setting portion is operable to select one of a plurality of different individual-frequency-utilization-ratio frequency utilization ratio distribution patterns each of which represents a relationship

between said-the plurality of mutually adjacent frequency channels and said-the individual frequency utilization ratio of the subcarrier signal, said-the endpoint device including a memory storing data table representative of said-the different individual-frequency-utilization-ratio ~~frequency utilization ratio~~ distribution patterns, said-the frequency determining portion being operable to hop the frequency of the subcarrier signal according to the selected one of said-the different individual-frequency-utilization-ratio ~~frequency-utilization ratio~~ distribution pattern~~s~~ patterns.

33. (Currently Amended) The endpoint device according to claim 28, wherein said frequency utilization ratio ~~the individual-frequency-utilization-ratio~~ setting portion is operable to set the distribution of the individual frequency utilization ratio of the subcarrier signal so that a center frequency of said-the distribution is lower when said-the battery cell is a primary battery cell, than when said-the battery cell is other than said-the primary battery cell.

34. (Original) The endpoint device according to claim 28, further comprising a solar cell as a power source device.

35. (Currently Amended) The endpoint device according to claim 28, wherein said frequency utilization ratio ~~the individual-frequency-utilization-ratio~~ setting portion is operable to set the distribution of the individual frequency utilization ratio of the subcarrier signal, by changing at least an amount of data transmitted with said-the reflected signal and a time period during which said-the reflected signal is transmitted, each time the reflected signal having a selected one of said-the mutually adjacent frequency channels is transmitted.

36-38. (Canceled)

39. (Currently Amended) A communication system comprising:
an interrogator having a transmitting portion operable to transmit an interrogating signal containing a main carrier; and

a plurality of endpoint devices each operable to receive the interrogating signal and respond to the interrogator with a reflected signal that is generated by modulating the main carrier with appropriate information;

each endpoint device including:

(a) an individual-frequency-utilization-ratio setting portion operable to set a distribution of an individual frequency utilization ratio which is a ratio of a time period during which each frequency channel is used as a hopping frequency of a subcarrier signal in which a frequency hopping is implemented and which is used to modulate said-the main carrier over a predetermined range of frequency of the subcarrier signal, which consists of a plurality of mutually adjacent frequency channels,

(b) a frequency determining portion operable on the basis of the distribution of the individual frequency utilization ratio set by said-the individual-frequency-utilization-ratio setting portion to determine a frequency of said-the subcarrier signal by random selection within said-the predetermined range of frequency,

(c) a battery cell, and

(d) a power-source-information detecting portion operable to detect supply-voltage information indicative of at least two discrete supply voltages of said-the battery cell, the at least two discrete supply voltages of the battery cell being at least able to power the endpoint device;

the interrogator including:

(i) an overall-frequency-utilization-ratio determining portion operable to determine a distribution of an overall frequency utilization ratio of the reflected signal received from said-the plurality of endpoint devices,

(ii) an endpoint-device monitoring portion operable on the basis of said-the supply-voltage information received from said-the power-source-information detecting

portion to determine one of a plurality of predetermined supply voltage ranges in which the supply voltage of said-the battery cell detected by said-the power-source-information detecting portion of said-the each endpoint device falls, and

(iii) a switching-information generating portion operable on the basis of the distribution of said-the overall frequency utilization ratio determined by said-the overall-frequency-utilization-ratio determining portion, and a result of determination by said-the endpoint-device monitoring portion, to generate switching information on the basis of which said-the individual-frequency-utilization-ratio determining portion of said-the each endpoint device sets the distribution of said-the individual frequency utilization ratio of the subcarrier signal;

the transmitting portion of said-the interrogator being operable to transmit said-the interrogating signal containing said-the main carrier and said-the switching information generated by said-the switching-information generating portion; and

the individual-frequency-utilization-ratio setting portion ~~being operable to set, is configured to shift a statistical center frequency of the distribution of the individual frequency utilization ratio to a lower frequency in response to a supply voltage of the battery cell being lower than a predetermined threshold value,~~

wherein the statistical center is shifted based on the switching information generated by the switching-information generating portion and one of the at least two discrete supply voltages of the battery cell detected by the power-source-information detecting portion.

the statistical center is shifted by selecting a first-individual-frequency-utilization-ratio distribution pattern from a plurality of individual-frequency-utilization-ratio distribution patterns that includes at least the first individual-frequency-utilization-ratio

distribution pattern and a second individual-frequency-utilization-ratio distribution pattern,
and

wherein the first individual-frequency-utilization-ratio distribution pattern is
relatively high in the relatively low frequency channels and the second-individual-frequency-
utilization-ratio distribution pattern is relatively high in the relatively high frequency
channels. ~~of a first distribution pattern in which the individual frequency utilization ratio is~~
~~relatively high in the relatively low frequency channels and a second distribution pattern Pt in~~
~~which the individual frequency utilization ratio is relatively high in the relatively high~~
~~frequency channels, the first distribution pattern, on the basis of said switching information~~
~~generated by said switching information generating portion and one of the at least two~~
~~discrete supply voltages of said battery cell detected by said power-source information~~
~~detecting portion so that a center frequency of the distribution of the frequency utilization~~
~~ratio of the subcarrier signal is lowered, when a supply voltage of said battery cell detected by~~
~~the power-source information detecting portion is lower than a predetermined threshold~~
~~value.~~

40. (Previously Presented) The communication system according to claim 39,
wherein ~~said the~~ switching-information generating portion is operable to generate the
switching information for raising a center frequency of the distribution of ~~said the~~ individual
frequency utilization ratio of the subcarrier signal of ~~said the~~ each endpoint device, when ~~said~~
~~the~~ overall-frequency-utilization-ratio determining portion determines that ~~said the~~ overall
frequency utilization ratio of ~~said the~~ reflected signals in low frequency channels of ~~said the~~
predetermined range of frequency of the subcarrier signal is higher than a predetermined
threshold value.

41. (Currently Amended) The ~~endpoint device~~communication system according
to claim 39, wherein ~~said the~~ switching-information generating portion is operable to generate

the switching information for lowering a center frequency of the distribution of said-the individual frequency utilization ratio of the subcarrier signal of said-the each endpoint device, when said-the overall-frequency-utilization-ratio determining portion determines that said-the overall frequency utilization ratio of said-the reflected signals in said-the predetermined range of frequency of the subcarrier signal is lower than a predetermined threshold value.

42. (Currently Amended) The ~~endpoint deviee~~communication system according to claim 39, wherein said-the plurality of endpoint devices include at least one first endpoint device wherein a primary battery cell is provided as said-the battery cell, and at least one second endpoint device wherein a secondary battery cell is provided as said-the battery cell, said-the switching-information generating portion being operable to generate the switching information that causes said-the individual-frequency-utilization-ratio setting portion of each of said-the at least one first endpoint device to set the distribution of said-the individual frequency utilization ratio of the subcarrier signal so that a center frequency of the distribution of said-the individual frequency utilization ratio of the subcarrier signal of said-the each first endpoint device is lower than that of said-the each second endpoint device.

43–47. (Canceled)